



# UNITED STATES PATENT AND TRADEMARK OFFICE

54  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/585,678	06/01/2000	Eric E. Ellingson	60191	4533

23735 7590 06/01/2005

DIGIMARC CORPORATION  
9405 SW GEMINI DRIVE  
BEAVERTON, OR 97008

EXAMINER

PATEL, SHEFALI D

ART UNIT	PAPER NUMBER
----------	--------------

2621

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/585,678

Applicant(s)

ELLINGSON, ERIC E.

Examiner

Shefali D. Patel

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. The amendment was filed on December 16, 2004.
2. Claims 1-28 have been canceled.
3. Claims 29-56 are newly added.

### *Response to Arguments*

4. Applicant's arguments filed on December 16, 2004 (pages 6-8) are have been fully considered but they are not persuasive.

In last two full paragraph on page 6 of the remarks, applicant argue with regard to claim 29 stating that Borza does not include "a subject distinct from the operator. Rather, the subject of Borza's image is the operator." The applicant further summarizes the distinction of image source 1 and image source 2 with reference to Figure 2.

The examiner disagrees.

Borza discloses subject information (included in an image disclosed with reference to Figure 7a at col. 10 lines 50-56) as well as user attribute of an operator (i.e., fingerprint of the user at col. 7 lines 3-6). Note, the fingerprint is encoded within the image frame as disclosed in Figure 3, col. 7. This image is being analyzed to determine whether the fingerprint exist in an image or not at col. 10-11 with reference to Figures 7a and 7b. Please note that the distinction between the two image sources is not recited in an at least independent claim 29. The examiner is to give its broadest interpretation possible while examining the claims.

The same applies to the arguments made with regards to claim 49 on page 7 as Borza discloses decoding method at col. 11 line 65 to col. 12 lines 1-5.

5. Applicant's arguments with respect to claim 48 on bottom of page 6 to page 7 have been considered but are moot in view of the new ground(s) of rejection.

*Claim Objections*

6. Claim 51 is objected to because of the following informalities: Claim 51 line 2 on page 4 states "...processing said to obtain...". It is unclear what is being processed. It seems like there is a word missing between "said" and "to". Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 29-33, 35, 43, 45-46, 49, 51, 54, and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Borza (US 5,995,630).

With regard to **claim 29** Borza discloses a method comprising: (a) capturing attribute information from an operator (capturing a fingerprint, col. 7 lines 4-6; col. 11 lines 62-63); (b) under control of said operator, capturing subject information from a subject distinct from said operator (an image disclosed with reference to Figure 7a at col. 10 lines 50-56. Figures 7a and 7b); and (c) encoding data related to said captured attribute information in subject data related to the captured subject information (col. 7 lines 11-21 and 53-56; col. 13 lines 26-30. The encoding process and advantage(s) are listed at col. 6 lines 48-65).

With regard to **claim 30** Borza discloses biometric information as a fingerprint at col. 7 lines 4-6.

With regard to **claim 31** Borza discloses an image of an identifying characteristic of the operator (identifying the fingerprint image at col. 7 line 6 and lines 41-43).

Art Unit: 2621

With regard to **claim 32** Borza discloses the method where step 'c' in claim 29 follows step 'b' in claim 29. Encoding takes place only after the image is being captures as seen at col. 7 lines 3-20 in Borza.

With regard to **claim 33** Borza discloses having encoded data (i.e., fingerprint), which is statistically unique to the operator (the fingerprint information is unique to each operator).

With regard to **claim 35** Borza discloses processing said captured attribute information to yield data that is encoded in the subject image (processing fingerprint to encode in an image, col. 7 lines 3-14 and lines 40-56).

With regard to **claim 43** Borza discloses fingerprint scan information at col. 7 lines 4-6.

With regard to **claim 45** Borza discloses a computer readable medium as seen in Figure 8 (computer 10).

With regard to **claim 46** Borza discloses an apparatus as seen in Figure 8.

**Claim 49** is rejected the same as claim 29. Thus, arguments similar to that presented above for claim 29 is equally applicable to claim 49. Claim 49 distinguishes from claim 29 only in that it recites a decoding claim. Thus, arguments similar to that presented above for claim 29 is equally applicable to claim 49. Applicant's attention is invited to col. 11 lines 65 to col. 12 lines 1-5 where decoding is disclosed in Borza.

With regard to **claims 51 and 54** Borza discloses capturing and processing biometric information from the operator (capturing a fingerprint, col. 7 lines 4-6; col. 11 lines 62-63).

**Claim 56** recites identical features as claim 45. Thus, arguments similar to that presented above for claim 45 is equally applicable to claim 56.

*Claim Rejections - 35 USC § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 42, 44, 50, 52-53, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borza (US 5,995,630) in view of Musgrave (hereinafter, "Musgrave '746") (US 6,208,746).

With regard to **claim 44** Borza discloses the method as disclosed above in claim 29 and the arguments are not repeated herein, but are incorporated by reference. Borza does not expressly disclose watermark or steganography. Musgrave '746 discloses watermarking at col. 2 lines 48-51 and col. 3 lines 12-16. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Musgrave '746 with Borza. The motivation for doing so is to protect an image by watermarking/steganographically embedding. Therefore, it would have been obvious to combine Musgrave '746 with Borza to obtain the invention as specified in claim 44.

With regard to **claim 42** Musgrave '746 discloses retinal scan information (See, col. 3 line 20).

With regard to **claim 50** Musgrave '746 discloses checking said decoded identification data to identify the operator (col. 4 lines 10-24).

With regard to **claim 52** Musgrave '746 discloses the decoding (decoder 30) comprising steganographically decoding the representation of the user attribute data from the media signal (decoding biometric watermark at col. 4 lines 36-39).

**Claim 53** recites identical features as claim 42. Thus, arguments similar to that presented above for claim 42 is equally applicable to claim 53.

With regard to **claim 55** Musgrave '746 discloses checking the decoded data against plural reference data at col. 4 lines 6-24

11. Claims 36 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borza (US 5,995,630) in view of Swartz et al. (US 5,767,496) (hereinafter, "Swartz").

**Claim 47** is rejected the same as claim 29. Thus, arguments similar to that presented above for claim 29 is equally applicable to claim 47, and the arguments are not repeated herein, but are incorporated by reference. Claim 47 distinguishes from claim 29 only in that it recites a camera with an eyepiece and capturing retinal information from an eye of the operator. Swartz discloses a camera with an eyepiece (video camera at col. 4 lines 5 and 14-19) and capturing retinal information of the operator (col. 3 lines 66 to col. 4 lines 1-12). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Swartz with Borza. The motivation for doing so is that it would be obvious to take an image of the retina (the same way the image of fingerprint is being captured in Borza) to compare and authenticate the user for certain accessibility rights and for ownership (col. 4 lines 10-12). Therefore, it would have been obvious to combine Swartz with Borza to obtain the invention as specified in claim 47.

With regard to **claim 36** Swartz discloses hashing attribute information (the biometric image scanned is transferred into biometric encoded symbol 70. See, col. 3 lines 66 to col. 4 lines 1-10).

12. Claims 34, 37-39, 41, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borza (US 5,995,630) in view of Soltesz et al (hereinafter, "Soltesz") (US 2001/0011680 A1).

**Claim 48** is rejected the same as claim 46. Thus, arguments similar to that presented above for claim 46 is equally applicable to claim 48, and the arguments are not repeated herein, but are incorporated by reference. Claim 48 distinguishes from claim 48 only in that it recites an optical system, as the apparatus, comprising attribute capture system including one or more elements in addition to said optical system. Soltesz discloses attribute capture system (biometric device 103 and see paragraph 31 on page 3)

Art Unit: 2621

on page 4 col. 1 line 2 and a camera 108 which is the optical device which takes an image of the subject on page 4 col. 1 lines 6-7 (paragraph 39). See Figures 3-4. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Soltesz with Borza. The motivation for doing so would be to be able to have the capability of biometric verification without the connection to a central database or the need for an on-site database of biometric data as suggested by Soltesz on page 1 paragraph 10. Therefore, it would have been obvious to combine Soltesz with Borza to obtain the invention as specified in claim 48.

With regard to **claim 34** Soltesz discloses the method where new attribute information is captured each time subject information is captured (the biometric reader reads new attribute each time subject changing and captured by camera 108, Figures 3-4 and its respective portion in the specification).

With regard to **claim 37** Soltesz discloses two different optical paths as seen in Figure 4. First optical path is from 103 to 111 to 112 where the biometric information is being processed. The second optical path is from 108 to 113 where the subject information is processed by the camera and the processor.

With regard to **claim 38** Soltesz discloses optical paths terminated at a common image sensor where the encryption and storage module 114 is disclosed, Figure 4.

With regard to **claim 39** Soltesz discloses different sensors (103 and 108 in Figures 3-4).

With regard to **claim 41** Soltesz discloses image sensors at 103 and 108 as seen in Figures 3-4.

13. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Borza in view of Soltesz as applied to claims 34, 37-39, 41, and 48 above, and further in view of Musgrave '746.

With regard to **claim 40** Borza (in view of Soltesz) discloses the method as disclosed above in claims 29 and 39 and the arguments are not repeated herein, but are incorporated by reference. Neither Borza nor Soltesz discloses one of the sensors being an audio transducer. Musgrave '746 discloses audio



Art Unit: 2621

transducer (speech recognition, See, col. 3 line 21-23). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Musgrave '746 with Borza and Soltesz. The motivation for doing so is to use the audio transducer to have another form of user attribute other than fingerprint and/or retinal scan. Speech pattern is as unique to a subject as fingerprint and/or retinal scan. Therefore, it would have been obvious to combine Musgrave '746 with Borza and Soltesz to obtain the invention as specified in claim 40.

### *Conclusion*

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D. Patel whose telephone number is 571-272-7396. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

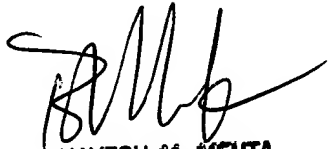
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shefali D Patel  
Examiner  
Art Unit 2621

May 24, 2005

  
**BHAWESH M. MENTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**